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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/584,189	05/31/2000	Seung-Chan Bang	11349-P65582US0	4177

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EXAMINER

WILLIAMS, DEMETRIA A

ART UNIT

PAPER NUMBER

2631

DATE MAILED: 07/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/584,189

Applicant(s)

BANG ET AL.

Examiner

Demetria A. Williams

Art Unit

2631

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --****Period for Reply****A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM****THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on 31 March 2000 and 11 March 2002.

2a) This action is **FINAL**.      2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 83-140 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 83-86,88,92-102,106,110-114,117-121,125-129,133 and 138-140 is/are rejected.

7) Claim(s) 87,89-91,103-105,107-109,115,116,122-124,130-132 and 134-137 is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5,6,7

4) Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.

5) Notice of Informal Patent Application (PTO-152)

6) Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 94 and 95 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 94 is dependent upon claim 9 and claim 95 is dependent upon claim 10. However, both claims 9 and 10 have been cancelled so it is unclear what the dependence should be for these claims.

3. Claims 111, 112, 138, and 139 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 111 and 112 depend from claim 99, which only claims that there are at least two channels. Claims 111 and 112 are drawn to applications having 3 or more channels. If there are only two channels present, the reference made in claims 111 and 112 are indefinite. A similar situation exists for claims 138 and 139 in that no claim from which these claims depend recite a number of channels. Independent claim 117 recites two or more channels. If there are only two channels present, the reference made in claims 138 and 139 are indefinite.

4. Claims 88, 92, 93, 96, and 97 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claim 88 recites the limitation "the code number" in fourth and fifth lines of the claims.

There is insufficient antecedent basis for this limitation in the claim. None of the claims from which claim 88 depends introduces a code number.

6. Claims 92 and 93 recites the limitation "said first logical operation" in the second line of the claim. There is insufficient antecedent basis for this limitation in the claim. None of the claims from which claims 92 and 93 depend introduces a logical operation.

7. Claim 96 recites the limitation "said first and second logical operation means" in the first and second lines of the claim. There is insufficient antecedent basis for this limitation in the claim. None of the claims from which claim 96 depends introduces first or second logical operations.

8. Claim 97 recites the limitation "said first and second selection means" in the first and second lines of the claim. There is insufficient antecedent basis for this limitation in the claim. None of the claims from which claim 97 depends introduces selection means.

#### ***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 83-85, 106, 113, 114, 117-119, and 133 are rejected under 35 U.S.C. 102(e) as being anticipated by Ovesjo et al ("Ovesjo").

11. Regarding claims 83, 113, and 117, Ovesjo discloses a system and method for channel code allocation comprising encoding data to generate data and control portions (see generally column, lines 41-42; column 6, lines 1-3), code generation means for generating spread codes based on the data rate (see generally column 6, lines 6-52; column 5, lines 15-45), and a means for spreading the control and data parts (see generally column 4, lines 43-46). Ovesjo further illustrates that consecutive pairs of data correspond to two points located on the same point (see generally figure 2).

12. Regarding claims 84, 114, and 118, Ovesjo discloses the applicability of the system and method for orthogonal variable spreading factor codes (see generally column 2, lines 59-61).

13. Regarding claims 85 and 119, Ovesjo discloses generating spreading factors relative to the data rate (see generally column 2, lines 5-6, column 4, lines 30-36).

14. Regarding claims 106 and 133, Ovesjo discloses a scrambling means for scrambling the signals (see generally column 4, line 67 – column 5, line 11).

#### ***Claim Rejections - 35 USC § 103***

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

17. Claims 86, 98-101, 110, 120, 121, 125-128, and 140 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ovesjo in view of Hiramatsu.

18. Regarding claims 86 and 120, Ovesjo discloses all of the elements as described above, but does not specifically recite the use of "code numbers" for the channels. Hiramatsu discloses an apparatus using a plurality of spreading codes wherein the spreading codes to be used are determined on the basis of the kind and number of spreading codes sent from the code number assigning processor (see generally column 6, lines 61-64). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Ovesjo to include the use of code numbers, as taught by Hiramatsu, in order to efficiently determine proper code allocation.

19. Regarding claims 98, 99, 125, and 126, Ovesjo discloses that the transmitter includes at least two channels, one data channel and a control channel (see generally column 5, lines 15-45; column 7, lines 13-16). This may include any additional channels above two as a matter of design choice.

20. Regarding claims 100, 101, 127, and 28, Ovesjo and Hiramatsu disclose all of the elements as described above, but neither specifically recite an absolute spreading factor and control number to be used for the control channel nor the specific relationship between the code number and the data channel. Ovesjo does explain that the spreading factor is two raised to some integer power (see generally column 2, lines 10-16). The exact integer value chosen is a matter of design choice based on the available data rate.

21. Regarding claim 110, Ovesjo illustrates in figure two a code tree for use in allocating codes. Choosing which codes to allocate to which channels is a matter of design choice, which would be obvious to one of ordinary skill in the art.

22. Regarding claims 121 and 140, Ovesjo discloses that the systems comprises one data channel and one control channel (see generally column 5, lines 15-45; column 7, lines 13-16) which can be used in various applications, including PRACH, which is well known in the communications art.

23. Claims 102 and 129 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ovesjo in view of Hiramatsu as applied above and further in view of Narvinger et al ("Narvinger"). Ovesjo and Hiramatsu disclose all of the elements as described above, but neither makes specific mention of generating a signature. Narvinger discloses a mobile system wherein different signature patterns are created to determine which spreading code to use (see generally column 2, lines 40-45). It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize a signature in order to determine which spreading or scrambling code to use.

***Claim Objections***

24. Claims 87, 89-91, 103-105, 107-109, 115, 116, 122-124, 130-132, and 134-137 are objected to as being dependent upon a rejected base claim.

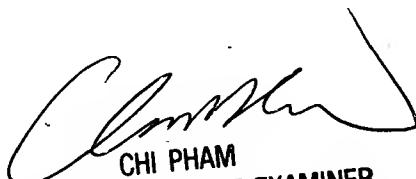
***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Demetria A. Williams whose telephone number is (703) 305-4078. The examiner can normally be reached on Monday - Friday, 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (703) 305-4378. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3800.

daw  
June 26, 2003

  
CHI PHAM  
SUPERVISORY PATENT EXAMINER  
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6/27/03